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Female Educational needs about mammography and its relationship with some risk factors

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Abstract

The incidence of breast cancer is increasing. Breast cancer which had been recorded in one in every 20 women in developed countries 50 years ago. The real reason for this cancer is yet unknown. Two thirds of the women diagnosed with breast cancer are affected, although they do not have any of the recognized risk factors. Diagnostic test is breast self examination, mammography, MRI etc. This was a descriptive, analytic cross sectional study that was conducted on 370 Iranian women upper than 35 years old who were selected by simple randomized method and assessed with a questionnaire including demographic data, breast cancer, and mammography with content validity and Test re test reliability. Mean age was 45±9.04 years old; mean of educational needs about: breast cancer and mammography was 11.92±4.7 (0-21), breast cancer symptoms 4.76±2.39 (0-10), risk factors of breast cancer 4.22±1.98 (0-9), high levels of educational needs was 26.5%, average levels: 66.5% and low levels 6.5%. There was a significant statistic relationship between educational needs and: mammography, family history of breast cancer, awareness about the illness, awareness about mammography, and age (PV=0.002). The study demonstrated that there are high educational needs about use of mammography and breast cancer risk factors. Therefore, it is recommended educational programs through health clinics, TV and radios, etc. As the information about breast cancers spreads throughout developing countries, it is essential to address screening tests, especially use of mammography.

Key words: Female, educational needs, mammography, risk factors.

1. Introduction

Breast cancer is the second leading cause of cancer-related deaths in women (Allen, 2010). At this time there are more than 2.6 million breast cancer survivors in the United States and has estimated 39520 deaths due to breast cancer in women in the U.S (Wender, 2011, American Cancer Society, 2011). Death rates from breast cancer have been declining since about 1990, with larger decreases in women younger than 50. These decreases are believed to be the result of earlier detection through screening and increased awareness, as well as improved treatment (American Cancer Society, 2011).Breast cancer was increasing over the years in Iran and is now ranked as the first among cancers diagnosed in women (Kolahdoozan et al, 2010). Based on the latest statistics announced by the Health Ministry of Iran, 27 people per hundred thousand women are diagnosed with breast cancer. Furthermore, the statistics of cancer incidence is increasing in Iran (Olfatbakhsh, 2011). Mousavi et al study showed that the most prevalence age of onset of breast cancer in Iranian women is between 40 to 49 years old (Mousavi et al 2007).

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Early detection of breast cancer plays an important role in reducing its morbidity and mortality. A variety of screening methods are used to detect breast abnormalities and potential malignancies (e.g., mammography, ultrasound, MRI, clinical breast examination, and BSE). Screening tests will not prevent breast cancer, but it can help find cancers when the likelihood of successful treatment is greatest (American Cancer Society, 2011). On the other hand the goal of screening exams, such as mammograms, is to find cancers before they start to cause symptoms. Breast cancers found during screening exams are more likely to be small and still confined to the breast (Rosen & Rosen 2011, Komen 2011).

The USPSTF and NCI encourage the use of mammography as a screening tool for breast cancer every 1 to 2 years starting at age 40 (USPSTF 2008, NCI 2009). Other screening tests such as BSE or CBE are a complement to mammograms and an opportunity for women and their doctor to discuss changes in their breasts, early detection testing, and factors in the woman's history that might make her more likely to have breast cancer. Without question, breast physical exam without a mammogram would miss the opportunity to detect many breast cancers that are too small for a woman or her doctor to feel but can be seen on mammograms (American Cancer Society, 2011). Although there are organizations that still recommend the practice of BSE, the use of this technique has come under scrutiny since newer screening technologies have been developed (USPSTF 2008). If MRI is used, it should be in addition to, not instead of, a screening mammogram. (American Cancer Society, 2011). Current evidence supporting mammograms is even stronger than in the past. For most women at high risk, screening with MRI and mammograms should begin at age 30 years and continue for as long as a woman is in good health. However, As long as a woman is in good health and would be a candidate for treatment, she should continue to be screened with a mammogram (American Cancer Society, 2011).

Women can feel confident about the benefits associated with regular mammograms for finding cancer early. Despite some their limitations, they remain a very effective and valuable tool for decreasing suffering and death from breast cancer (Rosen & Rosen 2011). Mammography sensitivity ranges from 56 to 95% depending on the quality of the test performed and the age of the person being screened (USPSTF, 2008). Furthermore, strict guidelines ensure that mammogram equipment is safe and uses the lowest dose of radiation possible (Rosen & Rosen 2011).One way to judge the value of a disease screening program -- such as annual screening mammograms for breast cancer is to figure out how many deaths will be prevented by the screening program. A study estimates that screening mammograms save the lives of between 3% and 13% of all women aged 50 to 59 diagnosed with early-stage breast cancer (Welch et al, 2011).

Sensiba and Stewart concluded that lack of knowledge is the most important factor for none intending to conduct cancer screening tests. Thus, giving right information about cancer and screening methods to the high risk group may reduce their wrong believes (Sensiba & Stewart, 1995). As high prevalence of breast cancer in Iran, Iranian women need specific information about health related knowledge, attitudes, and behaviors. This paper aimed to determine educational needs about breast cancer and mammography in Iranian women.

2. Methods

This was a descriptive, analytic cross sectional study that was conducted on 370 women upper than 40 years old in Hamedan city (a city in west of Iran). By using simple random method samples were selected and assessed through a questionnaire including demographic data, breast cancer, and mammography with content validity and Test re test reliability. Informed consent of each participant was sought and obtained, and they were assured of the confidentiality of their responses. Each participant was given a self-administered questionnaire, which was designed in two parts to evaluate information: the first part was included socio-demographic data (such as age, marital status, parity income status); and the second part was included their level of knowledge of breast cancer (such as what age should mammography start, how often should mammography be performed), the attitude of the participant toward mammography and questions relating to practices of mammography with content validity and test re test reliability for the questionnaire and sync observation for check list. Validity of the questionnaire was reviewed by 10 experts in this field. Also the reliability was determined by measuring the two researchers. Components was divided based on suitable and unsuitable, so that if sample ticked "correct" it was scored 1 and if she selected "incorrect" it was scored 0. Statistical analysis was performed using SPSS software. To set the frequency distribution tables in the data analysis, descriptive statistics were used. Chi-square test, Fischer’s exact & V Cramer test were used to examine educational needs.

3. Results:

Mean age of samples was 45.63 years with standard deviation of 9.04 (minimum 35 and maximum 80 years). Most of the respondents, 83.8% were married. The mean ages of the first experience of pregnancy were 20.96 with a standard division of 4.81 (ranged between 13-36 years old). Mean number of pregnancy`s history was 3.5±2.1 with ranged of 1-13 history of pregnancy, living children: 3±1.7 (1-9), history of abortion: 1.5±0.8 (1-4). 43.2% of the respondents had a job which among them, 9.2% worked as regular shifts with mean of 6.33±3.7 with a history of 1-14 years of working. 88.6% of them did no history of night work. 35.7% did not have a diploma or university educations. Approximately half of participants (49.2%) had a satisfied income level. Only 22.7% had a family or relatives history of breast tumor. 72.4% of participants had previous information about breast cancer and 62.2% about mammography. 24.9% of the respondents had gotten their information from television/radio, 26.5% from newspapers, 25.6% from their peer group, and 23% from home. Table 1 shows the respondent's knowledge of breast cancer. .

Table 1: Respondent's knowledge of breast cancer and mammography

Knowledge of breast cancer	Correct answers(%)
1-The breast cancer incidence in Iran is dedicated to what's out?	23.8
2- Breast cancer is one of what kinds of diseases?	58.9
3-At what age is a higher risk of breast cancer?	4.3
4-What is the most common site of breast cancer?	32.4
5- What is mammography role in preventing breast cancer?	76.2
6- At what age should BSE begin?	53
7-At what age mammograms should be done every one year?	44.9

25.4% of the respondents claimed that they carry out mammography which among them 13% was done by physician advice. Mean age of mammography was 36±7.2 with a range of 20 to 50 years and mammography times of 1.8±1.4 with a range of 1-8 times.

Table 2 shows awareness of women about breast cancer signs and breast cancer risk factors in women. When asked if they had adequate knowledge about breast cancer signs, only 24.9% of women were reported with adequate knowledge (awareness score more than 6), whereas the majority of them were reported with quite adequate knowledge (44.9%) with awareness score 0f 3-6, and inadequate knowledge (29.7%) with awareness score less than 3. Mean of educational needs about breast cancer signs was 4.76±2.39 (0-10). When asked if they had adequate knowledge about risk factors of breast cancer, only 10.8% of women were reported with adequate knowledge (awareness score more than 6), whereas the majority of them were reported with quite adequate knowledge (57.3%) with awareness score 0f 3-6, and inadequate knowledge (31.4%) with awareness score less than 3. Mean of educational needs about recognizing of breast cancer`s risk factors was 4.2±1.39 (0-9).There was meaningful relationship between educational needs and samples age (Fisher exact: 16.34, PV<0.002), mammography conducting (K- Square test: 14.64, PV=0.001), prior knowledge about breast cancer (K- Square test: 33.68, PV=0.005), family history of breast cancer (K- Square test:9.49, PV=0.009), or mammography (K- Square test:32.24, PV=0.005). V-Cramer test showed a poor relationship between educational needs and all above mentioned factors.

Table 2: Breast cancer signs and risk factors

What are breast cancer signs?	% of Correct answers
1- Touch of a painless lump with the walled in the breast	71.9
2- Orange peel on the part of the breast	35.7
3- Bloody or watery discharge from the nipple	55.1
4- A sinking of nipple in one breast	44.3
5- Sinking on the part of the breast	48.1
6- Sinking and breast skin ulcers	34.1
7- Breast deformity	66.5
8- pain in breasts	22.7
9- Enlarged axillary lymph nodes	68.1
10- Breast enlargement in both	27

When was asked what are the risk factors? Percent of correct answers about one of the questions were as the following. History of B.C. in another breast (79.5), Low-fat diet (43.8), Starting menstruation < 12 years (22.7), women with any children (43.8), First pregnancy< 30 years (62.7), Obesity (38.4), Cancer`s history in family or relatives (18.9), History of benign breast disease (41.1), and Menopause < 50 years (83.2).

4. Discussion

Women can feel confident about the benefits associated with regular mammograms for finding cancer early. Current evidence supporting mammograms is even stronger than in the past (American Society, 2011). It is one of the vital screening techniques for diagnose of breast lumps, especially cancer of the breast. About a quarter of women (26.5%) were reported with total inadequate knowledge (awareness less than 9). Mean of breast cancer and Mammography educational needs among women in this study was 11.92±4.7 (0-21). When asked if they had sufficient breast cancer knowledge, a few of the participants were reported with an adequate knowledge (6.5%, awareness scores > 18). The majority of women were reported with moderate educational needs level 66.5%, with awareness score of 9-18. Missing number were 2 people. A study carried out by Dundar et al on 244 women in a rural area in western Turkey corroborated this finding so that 44% of participants reported to have insufficient knowledge about breast cancer. About half of whom had acquired the information from health professionals, and level of breast cancer knowledge was the only variable significantly associated with the BSE and mammography practice (Dundar et al, 2006).

The highest proportion of the respondents obtained their first information from the television/radio and newspapers. This is in consonance with 2 studies in which mass media, such as newspaper and television, was the major information source of breast cancer (Bassey et al 2011, Yan 2009). It is therefore important that effort should be intensified in using these media to create breast cancer awareness and emphasize the importance of early detection as this appears to be better media to reach a wider audience.

Educational needs about breast cancer and Mammography among women in this study was relatively high. It is essential for women to receive more information to keep their families healthy; furthermore it causes them willing to share the knowledge they gained with family and friends. In our study the frequency of mammography was affected by a least one past reported mammography, the prior information about mammography and breast cancer. Also there was a meaningful relationship between educational needs with age and past family history. This was similar to a survey on 50 adult Iranian women, in Toronto so that results showed that, overall, participants had limited knowledge of breast cancer and screening practices and about 50% did not know the recommended time interval for

screening mammography (Vahabi, 2011). In another study 268 female health workers in Turkey among the variables related with mammography, only susceptibility perceptions of female health workers who had a mammogram was significantly higher than those who had not had a mammogram (Canbulat & Uzun, 2009).

Findings of present study highlight the need to educate Iranian women about the role of screening to promote early identification of breast cancer in the absence of symptoms. Culturally sensitive educational materials should be developed to address their specific needs. Such programs encourage Iranian women to adhere to recommended breast cancer screening guidelines. In a survey in Iran Significant increases were observed in knowledge and perceived benefit after the educational program (Moodi et al, 2011). Healthcare providers should also be educated about how to communicate breast health information effectively to women. The educational practices accomplished by nurses should include actions that involve the family and community; therefore, emphasizing the importance of social ties on health and promoting interactions between target women and existent social groups in the community. Opportunistic teaching during each health encounter should be encouraged and reinforced.

In conclusion, information presented here are intended to guide discussions on the use of Mammograms. This will enable healthcare professionals and patients to review current guidelines, risks and benefits, and information on when and how to start mammography. The ultimate goal is to empower women with the information they need to make educated decisions about their health.

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References

-American Cancer Society. (2011). Breast cancer: early detection. Atlanta, GA, *American Cancer Society*, *Available at: http://www.cancer.org/ Cancer /BreastCancer /More Information /Breast Cancer Early Detection*.

-Allen, T.L., Van, Groningen. B.J., Barksdale, D.J., & McCarthy, R.(2010). The Breast Self-Examination Controversy: What Providers and Patients Should Know? *J Nurse Pract*, 6(6):444-51.

-Bassey, R.B., Irurhe, N.K., Olowoyeye, M. A., Adeyomoye, A. A., & Onajole, A.T. (2011). Knowledge, attitude and practice of breast self examination among nursing students in Lagos University Teaching Hospital, Nigeria. *Educational Research,* 2(6), 1232-1236. Available online@ http://www.interesjournals.org/ER.

-Canbulat, N, & Uzun, O. (2009). Health beliefs and breast cancer screening behaviors among female health workers in Turkey. *Public Health Nurs*. 26(3), 269-76.

-Dündar, P.E., Ozmen, D., Oztürk, B., Haspolat, G., Akyildiz, F., Coban, S., & Cakiroglu, G.(2006). The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in western Turkey. *BMC Cancer,* 24(6), 40-43.

-Kolahdoozan, S., Sadjadi, A., Radmard, A.R., & Khademi, H. (2010). Five common cancers in Iran. *Arch Iran Med,* 13(2), 143–6.

-Komen, S.G. (2011). Brest self awareness. Available at: *ww5.komen.org/BSE*.

-Mousavi, S.M., Montazeri, A., Mohagheghi, M.A., Jarrahi, A.M., Harirchi, I., Najafi, M., & et al. (2007). Breast cancer in Iran: an epidemiological review. *Breast J,* 13(4), 383–91.

-Moodi,M., Baladimood, M., Sharifirad, G.R., Shahnazi, H., & Sharifzadeh, G. (2011). Evaluation of breast self-examination program using Health Belief Model in female students. *J Res Med Sci,* 16(3), 316–322.

-National Cancer Institute (NBI). (2009). Breast cancer screening summary of evidence [health professional version]. *Available at: http://www.cancer.gov/cancertopics/pdq/screening /breast/ Health Professional / page 2*

-Olfatbakhsh, A. (2011). For breast cancer in women. Available at: www.eram *news.ir*.

-Rosen, L. & Rosen, G. (2011). Breast Cancer: Early Detection. The importance of finding breast cancer early. American Cancer Society, Inc. Available at: *American Cancer Society/ Learn about cancer/Breast Cancer/Early Detection***.**

-U.S. Preventative Services Task Force (USPSTF). Agency for Healthcare Research and Quality. (2008)**.** Careening for breast cancer. *Available at: http://www.ahrq.gov/clinic/uspstf/uspsbrca.htm*

-Vahabi, M.(2011). Knowledge of breast cancer and screening practices among Iranian immigrant women in Toronto. *J Community Health,* 36(2), 265-73.

-Wender, R. (2011). Ways to Increase Cancer Screening Rates of Documentation. Department of Family & Community Medicine, Thomas Jefferson University, Philadelphia, PA. Available at: *The guidelines Advantages.org*

-Welch, H.G., Frankel, B. A. (2011).Available at: www.breastcancer.org/symptoms /testing/ new research.

-Yan, Y.Y. (2009). Breast Cancer: Knowledge and Perceptions of Chinese Women in Hong Kong. *Global J. Health Sc.* 1, 97-105.